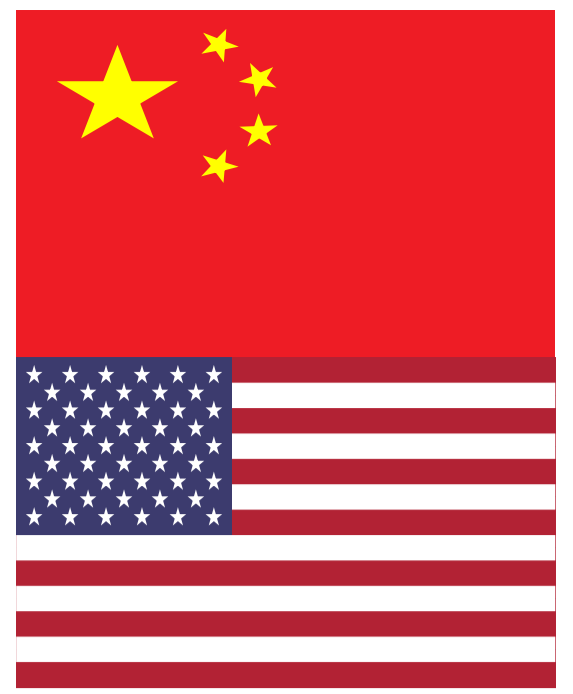


# Ventilation Air Methane Abatement in Shanxi, China

China / Asia



## PROJECT DESCRIPTION

- Anguil Environmental Systems engineers in the United States, working with a team in Shanghai, China, have successfully designed, installed, and are now operating methane extraction, destruction, and energy recovery systems at six sites in Shanxi province in China.
- The larger systems control up to 600,000 Nm<sup>3</sup>/hour of Ventilation Air Methane (VAM) emissions.
- With Anguil's Regenerative Thermal Oxidizers (RTO) design, no auxiliary energy is required for combustion if adequate incoming methane concentrations are maintained.

## RESULTS ACHIEVED

- Anguil Environmental Systems recommended the use of RTO technology, equipped with hot gas bypass, to destroy the VAM emissions and some low concentration of Coal Mine Methane (CMM) from the drainage pipes at the coal mining facility.
- Regulatory Initiative required consideration of using excess heat produced during oxidation process is routed from hot gas bypass dampers to a boiler system to generate enough steam, which is led to the steam turbine for electricity generation. Unlike traditional methods of power generation by burning coal or gas, using the excess heat from RTO does not result in the presence of nitrogen oxide (NOx).
- This project consists of 6 RTOs that process a total exhaust volume of 540,000 Nm<sup>3</sup>/hour with an average methane concentration of 1.2%. At full capacity, the system will generate electric power with installed capacity of 15 megawatts which will be returned to the national power grid.
- The methane destruction efficiency is above 99.5% and the system is capable of destroying 51 million cubic meters of methane annually.

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### PARTNERS INVOLVED IN PROJECT

- Anguil Environmental Systems Inc.
- Anguil Environmental Asia (Shanghai) Ltd

